Framework for brand positioning of automotive lubricants by using structural equation modelling

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Abstract: The automotive lubricant market is at the booming phase in India. The demand for automobile products is increasing very promptly, which have a significant impact on the demand for automotive lubricant. Due to the huge demand for automotive lubricants, the competition between auto lubricant producers also intensified which has resulted in a perfectly competitive market of auto lubricants. The lubricant companies are focusing on brand positioning of automotive lubricants to influence the end consumers and are also targeting the rural market to increase the market share. This research paper is mainly focused on identifying the important factors of the brand positioning of automotive lubricants. First, an extensive literature review has been done to identify the important variables of brand positioning. Factor analysis has been applied to reduce the number of factors up to five factors. Further, the reliability of the factors has been checked. The model fit indices of the measurement model and structural model have been calculated and found satisfactorily. Finally, a framework for the brand positioning of automotive lubricants has been developed by using structural equation modelling.

Keywords: brand positioning; automotive lubricants; structural equation modelling; framework; measurement model.

Biographical notes: Gautam Srivastava is working as an Assistant Professor at GL Bajaj Institute of Management and Research, Greater Noida. He has more than 15 years of academic experience. He has earned his PhD from the School of Business, University of Petroleum and Energy Studies, India. His area of specialisation is Business Statistics and Marketing. His research has been published in various national and international journals.

1 Introduction

As there is a rapid change in technology in the whole world, as a result, the lifestyle of the people and the industrial change is also increasing at a fast pace and the backbone of all of them are automotive products. These products assist in designing the framework of the economic development of countries around the globe. India is the third-largest country in the world in the consumption of automotive lubricants only lagging behind the USA and China. According to Chauhan et al. (2017) at present, the automotive industry

is worth nearly 80 billion which is expected to rise to 100 billion by the year 2025. The Indian market is flooded with low budget cars that are easily affordable by the users and this is one of the major causes of the rapid increase in the automotive segment in the Indian market (Khandelwal, 2015). This huge number of vehicles requires a huge number of lubricants to run effectively. There are numerous brands of automotive lubricants such as Servo, Castrol, Shell, Veedol, etc. Consumers have a wide range of lubricants and they can buy the best one from them. Here, arises the need for brand positioning which becomes very important for the companies to increase the sale volume of their products which they offer. Brand positioning is a tool that is used by the marketer to create an image of the brand in the minds of their customers (Zhang, 2015). According to Philip Kotler, "Brand positioning is the act of designing the company's offering and image to occupy a distinctive place in the mind of the target market" (Miquel-Romero et al., 2014). According to Castrol's annual report (2018), the Indian lubricant market comprises about 6% of the total lubricant demand in the global market which is nearly 2.1 million metric tons. There is a high demand for automotive lubricants in comparison to the demand for industrial lubricants (Sharma and Singhal, 2019). In the year 2018, the automotive lubricant market was around $4.9 billion which is expected to rise to $10.3 billion in the year 2027. An increase in automotive lubricant consumption is due to an increase in the purchasing power of the people in India and also the availability of easy finance option available to the customers which help the customers to buy more vehicles for easing personal mobility. Another crucial factor is the lower prices of crude oil which helps the manufactures to earn a lot of profit margin. The consumers are aware of the benefits of using high-quality engine oil to increase the efficiency of their vehicles which in turn aids in increasing the sales volume of the automotive lubricants essentially. Ibusuki and Kaminski (2007) in their study concluded that good quality of automotive lubricants has a significant positive impact on the performance of automobiles which influence the purchase intention of the consumers. In this research paper, we will explore the antecedents of brand positioning of automotive lubricants by using Structural Equation Modelling.

2   Literature review

2.1   Automotive Lubricant

In today's era, consumer is demanding more descriptive approach in automotive lubricant sector. Now, consumers are more aware of the automotive lubricants which are being used in their vehicles (Srivastava, 2018). Due to the increase in sales of automotive products, the demand for automotive lubricants is also growing very rapidly. In India, the lubricant market is very large and it is growing very promptly (Aggarwal and Biturwar, 2017). Due to the entry of private players, the Indian automotive lubricant market becomes very competitive and the end consumers are getting the benefits of it. Several types of research have been conducted to identify the important attribute which creates awareness among the consumers towards automotive lubricants (Lockström et al., 2010). According to Zakir and Khan (2011), price and availability are important attributes of automotive lubricants and can influence the customers. Some study has been done important attributes of automotive lubricants but research on importance of brand positioning of automotive lubricants is still missing.

2.2 Brand positioning

Before conducting the hypothetical research, various previous done researches have been studied. Pawar and Khandelwal (2011) have done an analysis and found that consumers must be made aware of the product differentiation to increase the sale volume. Joseph (2017) has identified quality as an important variable for brand preferences among consumers. He also concludes that consumers of higher economic and social classes are very much conscious of brand preferences. The brand image of a company acts as a driving force for brand performance (Zhang, 2015). Brand positioning acts as offerings of companies' products and services for its potential customers (Sapatnekar, 2015). Brand positioning of the products has a positive correlation with brand equity and market share. Pricing strategy plays a crucial role in building the brand image. The word of mouth is a very crucial component of brand positioning. A strong brand has a strong brand personality which is very well known by the customers (Czellar, 2003). The well-known brand has both higher status and reputation (Olsson and Sandru, 2006). The success of a product does not depend upon the designing of the products but also it depends upon the creation of the brand (Payne et al., 2009). Branding is all about creating a distinct image of the product in the mind of the customers (Feng, 2014). A brand positioning statement is an indispensable marketing tool for the company. Brand positioning of the products and services help the firm to maintain a long-term relationship with the customers (Aniszewska and Insch, 2012). The price and quality of the product is the primary device for shaping brand positioning in the mind of the customers (Pike, 2012). The brand positioning of the products and series is associated with brand placement, promotion, and packaging of the products (Warsewicz and Kulykovets, 2017). Customers measure different brands in various dimensions. The brand positioning statement consist contains four components target consumer, brand, competition and customer benefits (Lhotakova and Olsanova, 2013). A strong customer brand loyalty is dependent on higher customer perceived quality. A strong brand has strong brand equity. A brand also acts as a product differentiation tool (Buil et al., 2013). Accessibility is also an important tool of brand positioning (Jyothsna et al., 2016).

2.3 Construct of theoretical framework

In this study brand positioning of automotive lubricants has taken as a latent variable that can be measured directly through scaling. It was measured by latent variables trustworthiness, quality and reliability, promotional tools, accessibility and past purchase experience. The brand image of the products has a significant impact on the trustworthiness of the consumers (Zhang, 2015). The brand image could be measured with the help of the worthiness, novelty and performance of products and services (Olsson and Sandru, 2006; Pawar and Khandelwal; 2011 and Sapatnekar; 2015). Quality and reliability play a very crucial role to measure the brand positioning of automotive lubricants (Joseph, 2017; Aggarwal and Biturwar, 2017). The superiority of products is defined as the features of products perceived to be of higher quality than expected. It has a positive impact on brand positioning (Sapatnekar, 2015). There is also a positive correlation between promotional tools and brand positioning (Dou et al., 2010). Advertising, packaging and promotion act as an observed variable to measure the latent variables promotional tool (Warsewicz and Kulykovets, 2017). Accessibility is the extent to which consumers easily purchase and avail the products. Accessibility enhances the

branding of the products (Jewell and Saenger, 2014). Price, purchasing location and availability used as an observed variable to measure the latent variable accessibility (Zakir and Khan, 2011: Warsewicz and Kulykovets, 2017). Past purchase experience of the consumers is very crucial for the company to do understand the dynamic tastes and preferences of the consumers. It helps the company to modify its existing products (Horsky and Nelson, 1992). The past purchase experience is a latent variable that can be measured by the experience of the consumers, the extra benefits which they are getting and the durability of the products (Jyothsna et al., 2016; Feng, 2014; Ahnaf, 2016).

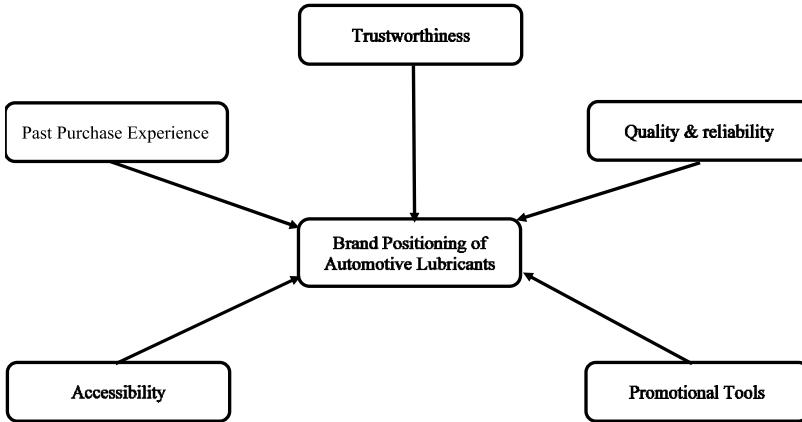**Figure 1**   Conceptual framework for brand positioning of automotive lubricants

Table 1   Construct of brand positioning

Construct	Identification of variables	References
Trustworthiness	Brand image	Zhang (2015)
	Worthiness	Olsson and Sandru (2006)
	Novelty	Pawar and Khandelwal (2015)
	Performance	Sapatnekar (2015)
Quality and reliability	Quality	Joseph (2017)
	Superiority	Sapatnekar (2015)
	Reliability	Aggarwal and Biturwar (2017)
Promotional tools	Advertising	Warsewicz and Kulykovets (2017)
	Packaging	Warsewicz and Kulykovets (2017)
	Promotion	Warsewicz and Kulykovets (2017)
Accessibility	Price	Zakir and Naeem Khan (2011)
	Availability's	Zakir and Naeem Khan (2011)
	Purchasing location	Warsewicz and Kulykovets (2017)
Past purchase experience	Experience	Jyothsna et al. (2016)
	Extra benefits	Feng (2014)
	Durability	Ahnaf (2016)

3 Hypothesis development

3.1 Trustworthiness

Making a new customer is costly than retaining the existing one. Consumer's retention is very important for the survival of automotive lubricants (Snyder, 2000). Increasing consumer awareness towards automotive lubricants drive the lubricants companies to make an appropriate marketing strategy to satisfy consumers. The lubricant companies need to make a strong tie with consumers and create trust among them. The trustworthiness of consumers towards companies is very crucial for their long-term survival (Singh et al., 2011). Trustworthiness plays an important role in brand creation. Retaining consumers and generating trustworthiness helps the companies to make it distinct from other competitors (Marsden, 2002).

H1 Trustworthiness has a positive impact on brand positioning of automotive lubricants.

3.2 Quality and reliability

The quality of automotive lubricants helps the lubricants companies to retain the consumers. The quality of automotive lubricants increases the durability of the automobile (Youngk, 2000). The reliability of the engine depends on the quality of automotive lubricants (Nazare et al., 2018). Quality and reliability differentiate the brand from others. It also helps to create a positive perception of consumers towards the brand. Consumers perceive superior brand on attributes such as reliability and quality of products (De Wulf et al., 2005). The credibility of the brand depends upon the quality. The quality of the product has a significant impact on its branding (Keller et al., 2002).
H2: Quality and Reliability have a positive impact on brand positioning of automotive lubricants.

3.3 Promotional tools

Promotional strategy is an important attribute for the branding of any product. Companies should focus on new innovative promotional tools to attract new consumers and retain the existing ones (Gwin and Gwin, 2003). Promotion is an important and powerful marketing tool in brand building and able to attract new customers, also ensure consumer loyalty. Advertising is one of the most important promotional tools (Melović et al., 2020). Advertising playing a significant role in creating customer loyalty towards automotive lubricants (Srivastava and Rai, 2019).

H3 Promotional Tools has a positive impact on brand positioning of automotive lubricants.

3.4 Accessibility

Accessibility is one of the most important drivers for brand positioning. It converts brand preference into a brand purchase (Malik and Sudhakar, 2014). The easily accessible product attracts the bulk consumers and plays a crucial role in creating a unique brand differentiated from others (Jun and Park, 2017). Accessibility of the product also differentiates it from other competitors and pivotal for brand positioning. If two brands have the same associations then consumers prefer those brands which are easily

accessible (Meyvis and Janiszewski, 2004). Accessibility is an important determinant for brand positioning (Hassan and Craft, 2012).

H4 Accessibility has a positive impact on brand positioning of automotive lubricants.

3.5 Past purchase experience

The past purchase experience is vital for predicting the future purchase intentions of the consumers. The past purchase experience of the consumers should be positive then only they are loyal to the companies. Past purchase experience plays a significant role in brand positioning (Ling et al., 2010). Consumer's feedback or past purchase experience is crucial for retaining the consumers and brand creation (Davis, 2007). Marketers are increasingly focusing on the purchase experience of consumers and making effective marketing and branding strategy (Hudson and Ritchie, 2009).

H5: Past Purchase Experience has a positive impact on brand positioning of automotive lubricants.

4   Research methodology

4.1   Data source

A marketing survey has been conducted in New Delhi to identify the perceptions of consumers towards automotive lubricants. Most of the lubricants producer's companies have their headquarters in New Delhi. Primary data of 500 respondents were collected from the New Delhi region. A pilot survey was conducted to check the instruments of the research.

The questionnaire was classified into five hypotheses proposed in this research. The collected data were divided into two sections. The first section consists of the demographic details of the consumers. The second part consists of the antecedents of brand positioning of automotive lubricants which are trustworthiness, quality and reliability, promotional tools, accessibility, and past purchase experience. A scale has been developed to measure the construct of the antecedents. Table 1 represents the detail construct of the antecedents. The closed-ended questionnaire's design on the Likert scale was used to measure the brand positioning of automotive lubricants. A scale was designed based on Likert scaling where 1 stands for strongly disagree and 5 stands for strongly agree. Expert opinions of academicians and corporate peoples have also been taken to develop the scale. Further, the validity and reliability of the scale have been checked. The reliability of the scales has been tested by conducting a pilot survey. Cronbach's Alpha of all the scales is greater than 0.6. Further, the validation has been done by Delphi techniques in which expert opinion has been taken. Delhi technique is used to measures the brand positioning of automotive lubricants. Brand Positioning of automotive lubricants taken as manifest variables. The scales were reliable and validated. Hence further analysis can be carried out. Likert scales were used to measure the scaling.

4.2   Sample frame

Table 2 represents the demographic profile of the respondents. A total of 500 respondents were taken for the survey. Out of 500 respondents, 64% were male whereas 36% were

female. 27% of the respondents have their ages between 20–30 years, 33.4% were fell between 30–40 years, 26.6% were fell between 40–50 years and 13% were fell above 50 years. 37% of the respondents have two-wheelers, 31.2% have their four-wheelers whereas the remaining 31.8% have commercial four-wheelers. 21.8% of respondents have income between 20000 – 30000 INR per month, 29.4% of respondents have income between 30,000–40,000 INR, 22.4% have income between 40,000–50,000 INR and the remaining 26.4% have income above 50,000 INR.

Table 2 Demographic profile of respondents

Variable	Categories	Frequency	Response (%)
Gender	Male	320	64.00%
	Female	180	36.00%
	20–30 years	135	27.00%
Age	30–40 years	167	33.40%
	40–50 years	133	26.60%
	Above 50 years	65	13.00%
	Two-wheeler	185	37.00%
Types of vehicles	Four-wheeler (individual)	156	31.20%
	Four-wheeler (commercial)	159	31.80%
	20,000–30,000	109	21.80%
	30,000–40,000	147	29.40%
Income	40,000–50,000	112	22.40%
	Above 50,000	132	26.40%

4.3 Structural equation modelling

Structural equation modelling is the combination of confirmatory factor analysis and multiple regression analysis. Structural equational modeming is used to analyse the relationship between latent variables and observed variables. SEM is composed of a measurement model and a structural model. The measurement model is used to measure the relationship between the latent variables and observed variables (Bechger et al., 2014). The structural model is used to determine path analysis and the direction of latent variables.

4.4 The measurement model

The confirmatory factor analysis was conducted to check the measurement model by using AMOS 20. The measurement model must have a satisfactory level of validity and reliability. The test of validity and reliability is necessary before developing the structural model. Table 3 shows that the latent variables trustworthiness, quality and reliability, promotional tools, accessibility, and past purchase experience are measured by four, three, three, three and three observed variables. The latent variable cannot be measured directly, it can be measure by the observed variable only (Cadogan and Lee, 2013). A total of sixteen observed variables were used to measure the five latent variables which are mention in Table 1. The measurement model was used to check the psychometric

properties of the variables. The value of Cronbach alpha is used to measure the internal consistency of the variables. Table 3 shows the reliability of the construct. The values of Cronbach alpha above 0.60 are considered to be good (Tavakol and Dennick, 2011). Table 3 shows the reliability of each latent variable is above 0.60, hence all the five latent variables trustworthiness, quality and reliability, promotional tools, accessibility, and past purchase experience are reliable and we can further proceed for structural equation modeling. The validity of the variables is measured by using factor loading. The factor loading of all the variables should be greater than 0.5 for the validation (Yong and Pearce, 2013). Table 3 shows that the factor loading of all the observed variables is greater than 0.50. Hence, the observed variables are validated for the construct. Discriminant validity is used to measure how a construct is distinct from each other (Finch and French, 2015). Two methods are used to measure the discriminant validity. The first way is correlation analysis. The correlations between the construct should not be high (Poulsen and French, 2008). Second, the average extracted variance between the construct is higher than the shared average variance between the constructs and the value of the average root square should be greater than the correlation of the constructs.

Figure 2   Measurement model for brand positioning of automotive lubricants
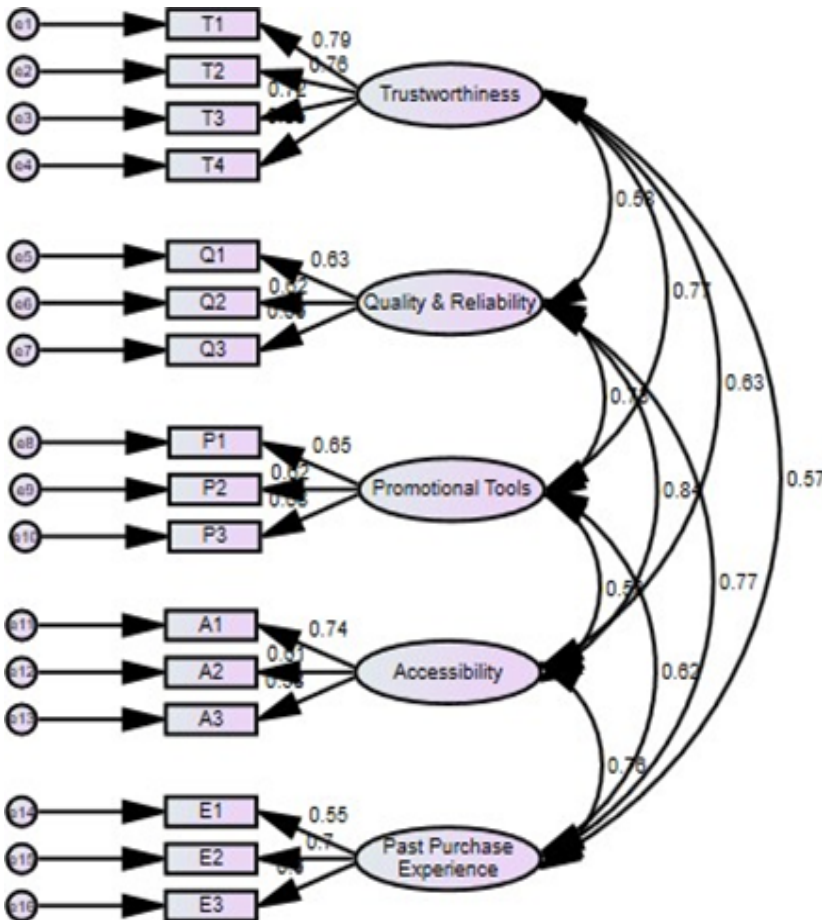
Figure 3 Reliability of the construct

Factors name	Items	Variables	Factor loading	Cronbach alpha
Trustworthiness				
	T1	Brand image	0.79	
	T2	Worthiness	0.76	0.82
	T3	Novelty	0.72	
	T4	Performance	0.85	
	Q1	Quality	0.63	
Quality and reliability				
	Q2	Superiority	0.62	0.78
	Q3	Reliability	0.66	
Promotional tools				
	P1	Advertising	0.65	
	P2	Packaging	0.62	0.83
	P3	Promotion	0.68	
Accessibility				
	A1	Price	0.74	
	A2	Availability	0.61	0.75
	A3	Purchasing Location	0.58	
Past purchase experience				
	E1	Experience	0.55	
	E2	Extra benefits	0.70	0.89
	E3	Durability	0.60	

Table 4 shows that all the factors have a low correlation coefficient with each other. This indicates that all the factors in the model are independent of each other. The average extracted variance of each factor is also greater than the shared variance between the factors. In Table 4, the square root value of AVE shown in bold is higher than the off-diagonal value in the corresponding column and row and exceeds the value of the correlation coefficient between the factors. This proves that the factors have a higher correlation with their variables in the measurement model. Hence, it is said that the model is satisfactory at the construct level.

4.5   The model fit

The model fit was tested by using different fit indices like trucker level index (TLI), the goodness of fit indices (GFI), comparative fit indices (CFI), normed fit indices (NFI) and root mean square approximation (RMSEA) (Tauscher and Abdelkafi, 2017). For the model to be fit, the value of the chi-square test should be less than 3. The value of TLI, GFI, CFI and NFI should be greater than 0.90 and the value of RMSEA should be less than 0.08.

Table 4   Correlation matrix and root of average variance extracted

Construct	CR	AVE	MSV	ASV	NT	PFT	EE	TA	RC
Trustworthiness	0.843	0.635	0.556	0.254	0.887				
Quality and reliability	0.863	0.764	0.413	0.213	0.231	0.697			
Promotional tools	0.878	0.867	0.275	0.142	0.274	0.654	0.887		
Accessibility	0.88	0.725	0.324	0.132	0.525	0.536	0.558	0.987	
Past purchase experience	0.825	0.621	0.453	0.246	0.716	0.736	0.536	0.656	0.864

Table 5   Measurement model indices

Model fit indices	Chi-square	GFI	CFI	TLI	NFI	RMSEA
Model	2.783	0.942	0.911	0.947	0.972	0.037

Table 5 shows a summary of the measurement model in which the value of the chi-square test is 2.783 which is less than 3, the value of TLI, GFI, CFI, and NFI is 0.947, 0.942, 0.911 and 0.972, respectively which are greater than 0.90. The value of RMSEA is 0.037 which is less than 0.08. Hence, measurement is good to fit and we can proceed with the structural model.

4.6   Structural model

Table 6 represents a summary of the structural model. In Table 6, the value of the chi-square test is 2.642. The value of TLI, GFI, CFI, and NFI is 0.921, 0.941, 0.978 and 0.936, respectively. The value of RMSEA is 0.043. Since all the indices meet the criteria of goodness to fit. Hence, the model is considered for the development of a framework by using structural equation modelling. The structural model has been shown in Figure 2.

Figure 3   Structural equation model for brand positioning of automotive lubricants
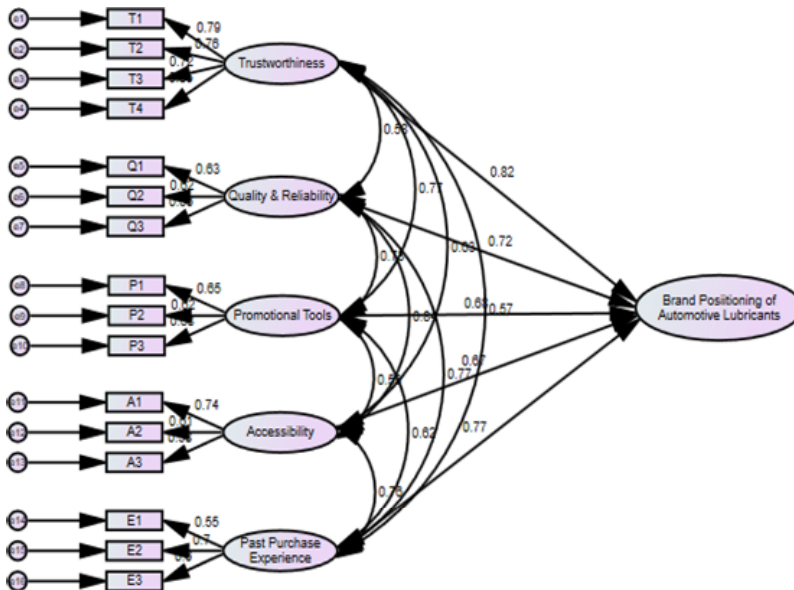
Table 6 Structural model indices

Model fit indices	Chi-square	GFI	CFI	TLI	NFI	RMSEA
Model	2.642	0.941	0.978	0.921	0.936	0.043

Table 7 shows the various properties of structural equation modelling like critical ratio, standard error, standard path coefficient, and hypothesis. The hypothesis is tested at a 5 percent level of significance. Table 7 also shows the value of square multiple correlations R^2. The value R^2 shows the strength of the proposed model. The value of R^2 is 0.79, which shows that five latent variables trustworthiness, quality and reliability, promotional tools, accessibility, and past purchase experience can explain 79% of the variation in brand positioning of automotive lubricants. Table 7 also represents the hypothesis testing where the value of the β coefficient shows the importance of latent variables. All five-hypothesis testing were found to be positive. The most important factor of brand positioning of automotive lubricants is quality and reliability ($\beta = 0.67$, $p < 0.05$). Hence, hypothesis H2 is accepted which states that quality and reliability have a positive impact on brand positioning of automotive lubricants. The second and third important factor is past purchase experience ($\beta = 0.62$, $p < 0.05$) and promotional tools ($\beta = 0.53$, $p < 0.05$). Hence hypothesis H5 and H3 are accepted which states that past purchase experience and promotional tools have a positive impact on brand positioning of automotive lubricants. The fourth and fifth important factors are accessibility and trustworthiness. Hence, hypothesis H4 and H1 are accepted which states that accessibility ($\beta = 0.42$, $p < 0.05$) and trustworthiness ($\beta = 0.34$, $p < 0.05$) have a positive impact on brand positioning of automotive lubricants.

Table 7 Hypothesis Testing

Hypothesis	Estimates (β)	Unstandardised regression weight	S.E.	C.R.	P-value	Squared multiple correlation (R^2)	Result
H_1	0.34	0.32	0.02	2.12	0.002		Supported
H_2	0.67	0.52	0.03	2.89	0.022		Supported
H_3	0.53	0.42	0.032	2.06	0.043	0.79	Supported
H_4	0.42	0.38	0.021	2.01	0.035		Supported
H_5	0.62	0.41	0.019	2.16	0.0.42		Supported

5 Result and discussion

The deregulation in the petrochemicals sector in India increased the intense competition among the automotive lubricants producers. The entry of private players in the Indian automotive lubricant market has intensified the competition. So, the public sector and private lubricant producers are focusing on the brand positioning of their automotive lubricant brand. In this study, we have identified five factors to develop the framework for the brand positioning of automotive lubricants. The framework is supported by empirical shreds of evidence. A hypothesis test has been conducted and factors are determined which are trustworthiness, quality and reliability, promotional tools, accessibility, and past purchase experience. All these factors have a significant impact on the brand positioning of automotive lubricants. Among all these factors quality and

reliability is the most important one. Past purchase experience and promotional tools are the second and third important factors. The fourth and fifth important factors for brand positioning of automotive lubricants are accessibility and trustworthiness.

5.1 Conclusions

The brand positioning of automotive lubricants is a new domain for research and very few researches have been conducted in this area. This is the new area of study which tries to find out the important factors of brand positioning of automotive lubricants by using structural equation modelling. Primary data has collected through a structured questionnaire. A random sampling technique was used for data collection. In this study, five antecedents of brand positioning of automotive lubricants were identified. These antecedents are trustworthiness, quality and reliability, promotional tools, accessibility and past purchase experience. All the antecedents are latent variables which determine by manifest variables mention in Table 3. The impact of these antecedents on brand positioning of automotive lubricants is shown in Figure 2. Structural equation modelling is used to represents the relationship between antecedents and brand positioning of automotive lubricants. The structural equation model shows that trustworthiness has the most significant positive impact on brand positioning of automotive lubricants followed by past purchase experience, accessibility, quality and reliability and promotional tools. This research has made a significant contribution to the literature by identifying the relationship between the brand positioning of automotive lubricants and their factors. It further establishes the relationship between the brand positioning of automotive lubricants and their factors. The findings of this study will help in the branding and promotion of automotive lubricants. This research will also help in bridging the gap between automotive lubricant producers and customers' expectations.

5.2 Managerial implications

This study concluded that automotive lubricant companies should focus basically on five important factors which are quality and reliability, past purchase experience, promotional tools, accessibility, and trustworthiness to gain the attention of customers and to convert them into consumers. These four factors have a significant positive impact on the brand positioning of automotive lubricants. Automotive lubricants should focus on these antecedents to retain the existing consumers and differentiate their brand from others. The proposed model helps marketers to design an appropriate marketing and brand positioning strategy. Brand positioning of automotive lubricants is requisite to create a distinct image in the mind of the consumers.

5.3 Limitation and future scope of the study

This research is restricted only to determining the important factors of the brand positioning of automotive lubricants. Industrial lubricant is not considered in this research. So, the brand positioning of industrial lubricants may be the future scope of this research. This research is also limited to two-wheelers and four-wheelers. Heavy vehicles did not consider in this research which would be the future scope of the research. Making an appropriate marketing strategy by adopting the outcome of this research will also be the future scope of the study.

References

Aggarwal S. and Biturwar C. (2017) 'A customer centric approach to the lubricant industry, International Journal of Management and Applied Science, 3 (10, pp.42 – 45.

Ahnaf A. (2016) *An Exploratory Study on the Factors Affecting Customers' Choice of Commercial Vehicle Lubricant Products*, Internship report, BRAC Business School BRAC University.

Aniszewska K. and Insch A. (2012) 'The strategic importance of brand positioning in the place brand concept: elements, structure and application capabilities', *Journal of International Studies*, Vol. 5, No. 1, pp.9–19.

Bechger, T.M., Blanca, M.J. and Maris, G. (2014) 'The analysis of multivariate group differences using common principal components', *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 21, No. 4, pp.577–587.

Buil, I., De Chernatony, L. and Martínez, E. (2013) 'Examining the role of advertising and sales promotions in brand equity creation', *Journal of Business Research*, Vol. 66, No. 1, pp.115–122.

Cadogan, J.W. and Lee, N. (2013) 'Improper use of endogenous formative variables', *Journal of Business Research*, Vol. 66, No. 2, pp.233–241.

Chauhan, A. S., Badhotiya, G. K., Soni, G. and Rathore, A. P. S. (2017) 'Analysis of success factors for a new product development initiative in Indian automotive industry: an ISM approach', *International Journal of Advanced Operations Management*, Vol. 9, No. 4, pp.246–263.

Czellar, S. (2003) 'Consumer attitude toward brand extensions: an integrative model and research propositions', *International Journal of Research in Marketing*, Vol. 20, No. 1, pp.97–115.

Davis, J. C. (2007) 'A conceptual view of branding for services', *Innovative Marketing*, Vol. 3, No. 1, pp.7–14.

De Wulf, K., Odekerken-Schröder, G., Goedertier, F. and Van Ossel, G. (2005) 'Consumer perceptions of store brands versus national brands', *Journal of Consumer Marketing*, Vol. 22, No. 4, pp.223–232.

Dou, W., Lim, K. H., Su, C., Zhou, N. and Cui, N. (2010) 'Brand positioning strategy using search engine marketing', *MIS Qquarterly*, pp.261–279.

Feng N. (2014) 'Building a strong brand and managing brand', *ASEE Conference Proceeding*, University of Bridgeport.

Finch, W. H. and French, B.F. (2015) '*Latent variable modeling with R*, Routledge, New York.

Gwin, C. F. and Gwin, C. R. (2003) 'Product attributes model: A tool for evaluating brand positioning', *Journal of Marketing theory and Practice*, Vol. 11, No. 2, pp.30–42.

Hassan, S. S. and Craft, S. (2012) 'Examining world market segmentation and brand positioning strategies', *Journal of Consumer Marketing*, Vol. 29, No. 5, pp.344–356.

Horsky, D. and Nelson, P. (1992) 'New brand positioning and pricing in an oligopolistic market', *Marketing Science*, Vol. 11, No. 2, pp.133–153.

Hudson, S. and Ritchie, J.B. (2009) 'Branding a memorable destination experience. the case of 'brand Canada', *International Journal of Tourism Research*, Vol. 11, No. 2, pp.217–228.

Ibusuki, U. and Kaminski, P. C. (2007) 'Product development process with focus on value engineering and target-costing: a case study in an automotive company', *International Journal of Production Economics*, Vol. 105, No. 2, pp.459–474.

Jewell, R.D. and Saenger, C. (2014) 'Associative and dissociative comparative advertising strategies in broadening brand positioning', *Journal of Business Research*, Vol. 67, No. 7, pp.1559–1566.

Joseph J.P. (2017) *A Study on the Effect of Brand Image on Consumer Preference with Reference to Youth in Bengaluru City*, Paper in International Conference, Kristu Jayanti College.

Jun, S.P. and Park, D.H. (2017) 'Visualization of brand positioning based on consumer web search information', *Internet Research*, Vol. 27, No. 2, pp.381–407.

Jyothsna, M., Mahalakshmi, S. and Sandeep, P.N. (2016) 'Role of brand equity and brand identity on preferences of smartphones among students', *Pacific Business Review International*, Vol. 8, No. 11, pp.44–53.

Keller, K.L., Sternthal, B. and Tybout, A. (2002) 'Three questions you need to ask about your brand', *Harvard business review*, Vol. 80, No. 9, pp.80–89.

Khandelwal R. and Pawar P.A. (2015) 'Analysis of Automotive lubricant market and developing marketing strategies for rural markets in India', *International Journal of Social Science & Interdisciplinary Research ISSN 2277-3630 IJSSIR*, October, Vol. 4, No. 10, pp.15–29.

Kotler, P. (2005) *Principles of Marketing*, p.302.

Ling, K.C., Chai, L.T. and Piew, T.H. (2010) 'The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International Business Research*, Vol. 3, No. 3, p.63.

Lockström, M., Schadel, J., Harrison, N., Moser, R. and Malhotra, M. K. (2010) 'Antecedents to supplier integration in the automotive industry: a multiple-case study of foreign subsidiaries in China', *Journal of Operations Management*, Vol. 28, No. 3, pp.240–256.

Malik, A. and Sudhakar, B.D. (2014) 'Brand positioning through celebrity endorsement – a review contribution to brand literature', *International Review of Management and Marketing*, Vol. 4, No. 4, p.259.

Marsden, P. (2002) 'Brand positioning: meme's the word', *Marketing Intelligence & Planning*, Vol. 20, No. 5, pp.307–312.

Melović, B., Jocović, M., Dabić, M., Vulić, T. B. and Dudic, B. (2020) 'The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro', *Technology in Society*, November, Vol. 63, pp.101–425.

Meyvis, T. and Janiszewski, C. (2004) 'When are broader brands stronger brands? An accessibility perspective on the success of brand extensions', *Journal of Consumer Research*, Vol. 31, No. 2, pp.346–357.

Miquel-Romero, M. J., Caplliure-Giner, E. M. and Adame-Sánchez, C. (2014) 'Relationship marketing management: Its importance in private label extension. *Journal of Business Research*, *67*(5, pp.667-672.

Nazare, M. I., Paleu, V., Bhaumik, S., Ianuş, G. and Olaru, D. N. (2018, November) 'Performances of automotive lubricants–tests on four ball machine', in *IOP Conference Series: Materials Science and Engineering*, Vol. 444, No. 2, p.022013, IOP Publishing, Iasi, Romania.

Olsson A & Sandru C (2006) *The Brand Proposition Positioning & Building Brand Personality*, Bachelor thesis, Lulea University of Technology.

Pawar, P.A. and Khandelwal, R. (2011) 'Analysis of automotive lubricant market in India and marketing strategies for rural markets', *Chronicle of the Neville Wadia Institute of Management Studies and Research*, April, pp.60–64.

Payne, A., Storbacka, K., Frow, P. and Knox, S. (2009) 'Co-creating brands: Diagnosing and designing the relationship experience', *Journal of Business Research*, Vol. 62, No. 3, pp.379–389.

Pike, S. (2012) 'Destination positioning opportunities using personal values: elicited through the repertory test with laddering analysis', *Tourism management*, Vol. 33, No. 1, pp.100–107.

Poulsen, J. and French, A. (2008) '*Discriminant function Analysis*, San Francisco State University, San Francisco, CA.

Sapatnekar, N. (2015) 'Brand positioning: control or influence on buying patterns of customers. *IJAPRR International Peer Reviewed Refereed Journal*, Vol. 2, No. 7, pp.12–17.

Saumya A. and Biturwar C. (2017) 'A customer centric approach to the lubricant industry', *The Role of Positioning in Strategic Brand Management – Case of Home Appliance Market*.

Sharma, R. and Singhal, P. (2019) 'Demand forecasting of engine oil for automotive and industrial lubricant manufacturing company using neural network', *Materials Today: Proceedings*, Vol. 18, No. 7, pp.2308–2314.

Singh, R., Paliwal, P. and Sakariya, S. (2011) 'Prabhar Oil Company, and distribution challenges in the Indian lubricants industry', *Emerald Emerging Markets Case Studies*, Vol. 1, No. 1, pp.1–14.

Snyder, J. (2000) *The Value of a Brand in the Marketing of Automotive Lubricants in a Business-to-Business Environment in South Africa*, (Doctoral dissertation, University of Johannesburg).

Srivastava, G. (2018) 'Importance of brand positioning for Indian automotive lubricants market', *Scholars Journal of Economics, Business and Management*, Vol. 5, No, 12, pp.1165–1171.

Srivastava, G. and Rai, S. (2019) 'Factors for Successful Lubricant Brand: A Study of Positioning Strategies in Indian Lubricant Market. *Optimization – The journal of research in management*, Vol. 11, No. 2, pp.55–61.

Täuscher, K. and Abdelkafi, N. (2017) 'Visual tools for business model innovation: recommendations from a cognitive perspective', *Creativity and Innovation Management*, Vol. 26, No. 2, pp.160–174.

Tavakol, M. and Dennick, R. (2011) 'Making sense of Cronbach's alpha', *International Journal of Medical Education*, June, Vol. 2, p.53.

Warsewicz H.G. and Kulykovets O. (2017) *Product Placement as an Effective Tool for the Brand Positioning*. Chapters.

Yong, A.G. and Pearce, S. (2013) 'A beginner's guide to factor analysis: Focusing on exploratory factor analysis', *Tutorials in Quantitative Methods for Psychology*, Vol. 9, No. 2, pp.79–94.

Youngk, R.D. (2000) 'Automobile engine reliability, maintainability and oil maintenance', in *Annual Reliability and Maintainability Symposium. 2000 Proceedings. International Symposium on Product Quality and Integrity (Cat. No. 00CH37055)*, pp.94–99, IEEE.

Zakir, S. and Naeemkhan, F. (2011) 'Consumer attitude towards automobile lubricants: a case study of PSO lubricants', *Journal of Independent Studies and Research*, pp.31–45.

Zhang, Y. (2015) 'The impact of brand image on consumer behavior: a literature review', *Open Journal of Business and Management*, Vol. 3, No. 1, pp.58–62.